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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/006,363 01/13/98 NAKAGAWA

K 47958

EXAMINER

WM02/1214

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BOSTON MA 02109

NGUYEN, J

ART UNIT

PAPER NUMBER

2673

DATE MAILED:

12/14/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/006,363

Applicant(s)

NAKAGAWA, KATSUYA

Examiner

Jimmy H. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- 1) ☒ Responsive to communication(s) filed on 26 October 2000.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some * c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☒ received.
2. ☐ received in Application No. (Series Code / Serial Number) _____.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 14) ☐ Notice of References Cited (PTO-892)
- 15) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 16) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 17) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 18) ☐ Notice of Informal Patent Application (PTO-152)
- 19) ☐ Other: _____.

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DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. (USPN: 5,581,243).

As per claims 1 and 4, Ouellette et al. discloses a virtual keyboard comprising a display (a display 28) for displaying a keyboard (a keyboard K), a transparent pressure sensitive panel (a touch screen 24) disposed on the display and a processor (a touch screen controller 18) for receiving information of positions detected and sent in a time sequence from the pressure sensitive panel when any key in the keyboard is pushed, identifying a position of the pushed key according to a coded electrical signal corresponding to the touched locations and outputting a code corresponding to a pushed key (figure 1, col. 1, lines 45-63 and col. 5, lines 4-10). Ouellette et al. further teaches that a well-known virtual keyboard functioning as a conventional keyboard or typewriter (col. 1, lines 51-63). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to recognize how a conventional keyboard operates, e.g., in order to display a capital "A", a special key "Shift" is first pushed and thereafter when both of

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the special key "Shift" and a general key "a" are pushed at the same time, the keyboard outputs a "A" code corresponding to the pushed combination of the special key "Shift" and the general key "a", and a capital "A" is thereby displayed on the screen. In other words, it would have been obvious to one of ordinary skill in the art to recognize that Ouellette et al. discloses the claimed invention as specified in claims above.

3. Claims 2, 3, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. in view of Dunthorn (USPN: 4,914,624).

In regard to claims 2 and 3 as applied to claim 1 above, and claims 5 and 6 as applied to claim 4 above, Ouellette et al. discloses the claim invention except that Ouellette et al. does not disclose expressly in many words the detailed functions of the virtual keyboard, i.e., the virtual keyboard comprises a processor for receiving the positional information including a furthest returning position, and for determining the position of the general key by doubling a distance between a special key position and the furthest returning position, so that the virtual keyboard operates in the same manner as a conventional keyboard.

However, Dunthorn discloses that it has been discovered that a first button, obviously considered as a special key, is first pushed and thereafter when both of the first button and the second button, obviously considered as a general key, are pushed at the same time, the touch screen returns an information including a middle position between two touched locations or two touched keys (col. 4, lines 4-30, lines 47-68). Furthermore, it would have been obvious to one of

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ordinary skill in the art to identify the position of the second button (i.e. the general key) from the received middle position.

Ouellette et al. discloses the claimed device except that Ouellette et al. does not disclose expressly in many words the detailed functions of the virtual keyboard as claimed. Dunthorn teaches that a first key is first pushed and thereafter when the first and second keys both are pushed at the same time, the received information including a middle position returns. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to recognize that Dunthorn remedies for the deficiency of Ouellette et al. in order to explain how the virtual keyboard may operate in the same manner as a conventional keyboard, as taught by Ouellette et al. (col. 1, lines 51-63). Therefore, Ouellette et al. in view of Dunthorn obviously discloses the claimed invention as specified in claims above.

Response to Arguments

4. With respect to the rejection under 35 U.S.C. 112, first paragraph, all claims are amended to overcome the rejection under 35 U.S.C. 112, first paragraph, therefore, Examiner withdraws this rejection.

5. Applicant's arguments filed, with respect to claims 1 and 4, "However, Ouellette is completely silent on that **a middle position signal** is outputted when two keys are pressed at the same time as is taught in the present invention", page 7, lines 6-8, have been fully considered

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but they are not persuasive, because claims 1 and 4 both do not recite a **“middle position signal”**.

6. Applicant's arguments filed “As to Dunthorn, this reference discloses a touch sensitive screen wherein when two places are touches at the same time, **a function for canceling a process etc. is outputted**. ... the pushed keys”, page 8, lines 10-14, have been fully considered but they are not persuasive, because a function of canceling a process is just an example of one of many functions that may be preestablished as taught by Dunthorn (col. 6, lines 48-55), and Dunthorn discloses that the buttons on the touch screen are assigned and defined by establishment of a function, i.e., a person of ordinary skill in the art may assign a button representing for a character (col. 4, lines 47-51). The important matter, which is discovered by Dunthorn, when a user touches two buttons on the touch screen, the touch screen returns an information which includes the middle position between the two touched buttons. Please see the detailed rejection above.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jimmy H. Nguyen whose telephone number is (703) 306-5422. The examiner can normally be reached on Monday - Thursday, 8:00 a.m. - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on (703) 305-4938. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-9051 for regular communications and (703) 308-6606 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.

JHN
December 13, 2000



BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600